Annual Report on Public Safety Wireless Voice and Data Communications in the Commonwealth of Kentucky

Submitted by Commissioner Mark Rutledge
Commonwealth Office of Technology
Finance and Administration Cabinet
September 15, 2007

Kentucky
Wireless Interoperability
Executive Committee

A Report to the Interim Joint Committee on Seniors, Veterans, Military Affairs, and Public Protection and the Interim Joint Committee on State Government on progress and activity by agencies of the Commonwealth to comply with standards to achieve public safety communications interoperability.

Kentucky
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Executive Summary

As required by KRS 11.5163, this report serves to update the committee members on the progress and accomplishments of the Kentucky Wireless Interoperability Executive Committee (KWIEC) since the last reporting cycle in furthering public safety communications interoperability.

The 2006 report identified five major goals for the Commonwealth for 2007 as listed below:

1. Design of a statewide voice interoperability system for public safety,
2. Complete the deployment of the KYWINS Messenger across all first responder agencies,
3. Design a technical approach for building a statewide communications system as recommended by the SAFECOM Project,
4. Install all of the new digital microwave systems in the eastern segment of the Kentucky Emergency Warning System (KEWS) and,
5. Establish a public awareness and outreach program for Public Safety and Communications Interoperability

Accomplishments

Goal 1 - Design of a statewide voice interoperability system for public safety.

The KWIEC discussed and evaluated several potential interoperability solutions and ultimately decided that the nearly completed Voice Mutual Aid Network met nearly all of the desired results. Of particular interest is the fact that this statewide system was completed in 2006 at a cost of less than $1 per citizen and covered well over 97% of the Commonwealth. Other solutions that were considered required completely new networks with huge implementation cost, long deployment times, and in the end would only have increased coverage by two percentage points. The potential cost and implementation time made these solutions nonviable.

Goal 2 - Complete the deployment of the KYWINS Messenger across all first responder agencies

This project was initially deployed as a pilot in the Center for Rural Development (CRD) region. The pilot transitioned into a fully operation program during the year and is currently serving all first responder agencies choosing to utilize its functions.

Goal 3 - Design a technical approach for building a statewide communications system as recommended by the SAFECOM Project

Many discussions were held by key KWIEC members and various working groups. It was decided that the SAFECOM recommendations would be considered in the creation of the Commonwealth's Long Term Strategic Plan for Statewide Interoperability as appropriate. Since the state has invested substantial sums of time and money in planning and implementing the

voice and data networks, recommendations from the SAFECOM report will be used where feasible.

Goal 4 - Install all of the new digital microwave systems in the eastern segment of the Kentucky Emergency Warning System (KEWS)

This project is well underway and the installation of new IP-based digital microwave radio systems in the eastern portion of the Commonwealth is on target for completion by the end of this year.

Goal 5 - Establish a public awareness and outreach program for Public Safety and Communications Interoperability

This goal is one of the most challenging and difficult to measure. Many different public awareness and outreach efforts have been considered and, where possible, have been implemented. Of particular significance has been the adoption of new technical tools to assist in meeting this goal. Specifically, the KWIEC is now using web-casting and conference bridges for all of its meetings. Additionally these meetings are recorded, slide shows are uploaded, and web links are made available on the KWIEC web site (www.kwiec.ky.gov) for later use.

Conclusion

Progress against Goals 1, 2 and 3 have allowed the transition of projects into operational programs, and allowed the KWIEC to refocus and refine their goals which are described more fully below. The focus of work for the remainder of the calendar year will be improvement of the existing Interoperability programs, completion of the digital microwave installs in eastern Kentucky, and continued outreach efforts.

These accomplishments have allowed the KWIEC to re-articulate and refine their major goals for the coming year to the following three:

1. Design of a statewide voice interoperability system for public safety.

2. Install all of the new digital microwave systems in the eastern segment of the Kentucky Emergency Warning System (KEWS)

3. Establish a public awareness and outreach program for Public Safety and Communications Interoperability

Purpose

As required by KRS 11.5163 – Annual Report by Chief Information Officer, "The executive director shall report by September 15 annually to the Interim Joint Committee on Seniors, Veterans, Military Affairs, and Public Protection and the Interim Joint Committee on State Government on progress and activity by agencies of the Commonwealth to comply with standards to achieve public safety communications interoperability."

Introduction

The Commonwealth of Kentucky considers communications interoperability as one of its highest priorities in the support of Kentucky's first responders. Governor Fletcher signed into law the Kentucky Wireless Interoperability Executive Committee which was charged with guiding the Commonwealth in all wireless communications interoperability initiatives. In the few short years that it has existed, the committee has been very successful in reducing the "Islands of Communications" problem prevalent in the Commonwealth prior to then.

This report serves to update the legislative members on the progress of the Kentucky Wireless Interoperability Executive Committee (KWIEC) since the last reporting cycle in the following areas. The KWIEC has:

- Continued to use the standardized template for the review and approval process of project submission plans in order to be in compliance with the directives of HB226
- Overseen the Architecture and Standards Working Group which is responsible for reviewing and assessing the wireless interoperability project plans submitted to the Commonwealth
- Provided briefings and meetings in support of interoperability initiatives
- Maintained and updated the KWIEC website with major interoperability initiatives
- Continued working toward the development of recommended and required architecture and standards, which ensure that new or upgraded Commonwealth public safety communications systems will interoperate

This report also describes the progress and accomplishments in furthering public safety communications interoperability in the following key initiatives:

- Statewide wireless data interoperability - Mobile Data Program
- Statewide wireless voice interoperability - Mutual Aid and Interoperability Program
- Statewide Instant Messaging - KYWINS Messenger Program

- Statewide Public Safety Infrastructure - Kentucky Emergency Warning System (KEWS) Project

Background

HB 309

The Kentucky General Assembly passed HB309 creating the Kentucky Wireless Interoperability Executive Committee (KWIEC), which is administered through the Commonwealth Office of Technology.

The committee benefits the Commonwealth by:

- Creating a nationally recognized name, the State Interoperability Executive Committee (SIEC), and structure as recommended by the Federal Communications Commission;
- Encouraging more involvement from interested agencies with the addition of local representatives from municipal and county government, police, fire, sheriff, EMS, and a 911 dispatch representative;
- Instituting an annual reporting mechanism whereby the chief information officer updates the Joint Interim Committee on Seniors, Veterans, Military Affairs, and Public Protection, and the Interim Committee on State Government;
- Addressing communications interoperability, a critically important homeland security issue;
- Advising and making recommendations to the chief information officer of the Commonwealth regarding strategic wireless initiatives, in order to achieve public safety voice and data communications interoperability.

HB 226

HB 226 was passed by the 2004 General Assembly and signed into law by Governor Ernie Fletcher. The Bill amended KRS 11.5162 to expand the definitions of "frequency," "interoperability," and "standards," and create definitions for "public safety shared infrastructure" and "primary wireless public safety voice or data communications systems," and excludes "911" telephone systems from the definition of "primary wireless public safety voice or data communications systems."

The entire text of KRS 11.5162 is available online at www.lrc.state.ky.us/KRS/011-00/5162.PDF

With the passage of HB 226, KRS 11.5163 was amended to include these requirements:

- The development and recommendation of required architecture and standards will ensure that new or upgraded Commonwealth public safety communications systems will interoperate.

- The Kentucky Wireless Interoperability Executive Committee shall be responsible for the evaluation and recommendation of all wireless communications architecture, standards, and strategies.
- All state agencies in the Commonwealth shall present all project plans for primary wireless public safety voice or data communications systems for review and recommendation by the committee, and the committee shall forward the plans to the chief information officer for final approval. Local government entities shall present project plans for primary wireless public safety voice or data communications systems for review and recommendation by the Kentucky Wireless Interoperability Executive Committee.
- The committee shall develop funding and support plans that provide for the maintenance of and technological upgrades to the public safety shared infrastructure, and shall make recommendations to the chief information officer, the Governor's Office for Policy and Management, and the General Assembly.
- The chief information officer shall examine the project plans for primary wireless public safety voice or data communications systems of state agencies and shall determine whether they meet the required architecture and standards for primary wireless public safety voice or data communications system.

The entire text of KRS 11.5163 is available online at www.lrc.state.ky.us/KRS/011-00/5163.PDF.

Kentucky Wireless Interoperability Executive Committee Members

The Kentucky Wireless Interoperability Executive Committee (KWIEC) consists of state and local representatives who are typically executives in their own agencies. The chart below lists the voting members on the committee and their representing agency.

Name	Representing	Position
Mark Rutledge	Commonwealth Office of Technology	Chair
Jim Barnhart	Office for Infrastructure Services	Member
Ken Mitchell	Office of the 911 Coordinator	Member
Michael Clark	Kentucky Educational Television	Member
Jennifer Weeks	Transportation Cabinet	Member
Don Pendleton	Justice Cabinet	Member
Major Brad Bates	Kentucky State Police	Member
Col. Robert Milligan	Department of Fish and Wildlife Resources	Member
Bill Carr	Natural Resources and Environmental Protection	Member
Col. Rodney Hayes	Division of Emergency Management	Member
Mary Pedersen	Kentucky Office of Homeland Security	Member
Melba Story	Cabinet for Health Services	Member
Mike Rosenstein	Council on Postsecondary Education	Member
Lonnie Lawson	The Center for Rural Development	Member
Constance Lawson	Municipal Government	Member
Seat in transition	County Government	Member
Michael Ward	Municipal Police	Member
Terry Lewis	Local Fire Department	Member
Seat in transition	County Sheriff	Member
Charles O' Neal	Local EMS	Member
James Morse	Local 911 Dispatch Center	Member

Working Groups of the KWIEC

Architecture and Standards Working Group

During the last quarter of 2006, the State Chief Information Officer reformed the Architecture and Standards Working Group (ASWG) under the chair of the Executive Director of the Office of Infrastructure and Services. A facilitator was assigned to oversee this program and coordinate all the various aspects of these assessments.

The Architecture and Standards working group is comprised of subject matter experts from a variety of agencies including Justice, The Center for Rural Development, Military Affairs, Emergency Management, Metro Louisville, and the Commonwealth Office of Technology. Each of these members is a subject matter expert in wireless communications. This group was charged with reviewing every wireless assessment to ensure that the KWIEC received the best recommendations possible.

Once the ASWG completed its review, the KWIEC could be certain that subject matter experts carefully considered the technical aspects of each plan before submitting a recommendation to the KWIEC. This allowed the KWIEC to concentrate on the larger picture and not become mired in the numerous technical details associated with each submission.

This group provides quarterly briefings to the KWIEC members on project assessment status.

Public Safety Working Group

The Public Safety Working Group (PSWG) is a group of wireless communications subject matter experts charged with writing the FCC Region 17 700MHz Plan and for overseeing the 800MHz re-banding for the Commonwealth. This group concentrated on plan development and frequency coordination with surrounding states.

This group provides periodic briefings to the KWIEC members as key events occur.

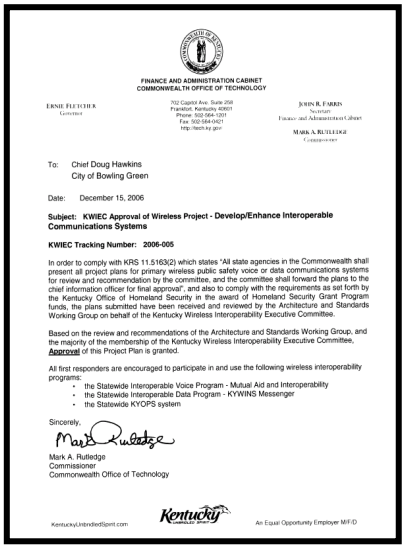
KWIEC Accomplishments

Wireless Project Plans Evaluated

As required by the KWIEC charter, this body reviewed an average of one wireless project plan per week during this last 12 month reporting period. The Architecture and Standards Working Group pre-screened each assessment for the KWIEC and in many cases worked directly with the local agencies to resolve technical issues before being presented to the KWIEC.

The ASWG's evaluation proved invaluable to the KWIEC and streamlined the project plan assessment process significantly. This process has worked exceptionally well as evidenced by the following.

- 51 Project Plans were evaluated
- 3 Project Plans were pulled by submitting agencies due to errors or omissions
- 47 Project Plans were recommended for approval
- 1 Project Plan was disapproved



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JOHN R. FARRIS
Secretary
Finance and Administration Cabinet

MARK A. RUTLEDGE
Commissioner

To: Chief Doug Hawkins
City of Bowling Green

Date: December 15, 2006

Subject: KWIEC Approval of Wireless Project - Develop/Enhance Interoperable Communications Systems

KWIEC Tracking Number: 2006-005

In order to comply with KRS 11.5163(2) which states "All state agencies in the Commonwealth shall present all project plans for primary wireless public safety voice or data communications systems for review and recommendation by the committee, and the committee shall forward the plans to the chief information officer for final approval", and also to comply with the requirements as set forth by the Kentucky Office of Homeland Security in the award of Homeland Security Grant Program funds, the plans submitted have been received and reviewed by the Architecture and Standards Working Group on behalf of the Kentucky Wireless Interoperability Executive Committee.

Based on the review and recommendations of the Architecture and Standards Working Group, and the majority of the membership of the Kentucky Wireless Interoperability Executive Committee, Approval of this Project Plan is granted.

All first responders are encouraged to participate in and use the following wireless interoperability programs:

- the Statewide Interoperable Voice Program - Mutual Aid and Interoperability
- the Statewide Interoperable Data Program - KYWINS Messenger
- the Statewide KYOPS system

Sincerely,

Mark A. Rutledge
Commissioner
Commonwealth Office of Technology

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Public Safety Interoperability Communications (PSIC) Grant

Three members of the KWIEC attended the National Governors Conference to coordinate the Commonwealth's effort to take part in this one-time $1 Billion PSIC federal grant program. This shared nationwide grant may potentially provide the commonwealth with several million dollars for use in upgrading interoperability efforts in the Commonwealth.

Led by a senior member of the KWIEC, a small temporary working group comprised of KWIEC members was created to oversee the efforts involved in competing for this grant. This working group created a Strategic Plan for Statewide Interoperability which will be used in part to request funds against this grant opportunity. The plan has been coordinated with the KWIEC and this grant effort will continue to be followed closely until the announcement is made later this year.

KWIEC Success toward established goals

Goal 1 - Continue efforts to improve statewide interoperability for public safety

This goal is being furthered by the KWIEC's continued support of ongoing interoperability programs and projects. The KWIEC receives periodic briefings on major interoperability programs currently in place in the Commonwealth. During these briefings, recommendations, issues, and potential solutions to problems are expressed.

Several interoperability projects were transitioned to operational programs in late 2006 and early 2007. The KWIEC continues to monitor, guide and make recommendations to ensure that these programs remain true to their charter. Since these operational programs remain critical to the Commonwealth's long term interoperability plan, they will continue to remain top priorities. These key programs and their current status are summarized below.

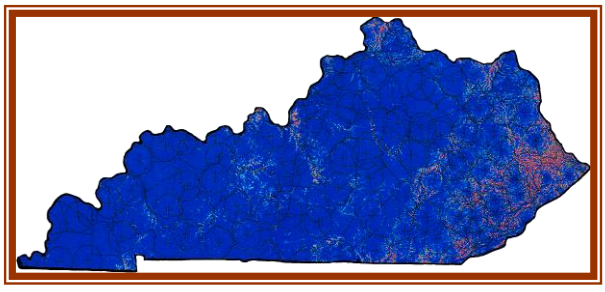
The KWIEC continues to monitor and endorse these programs and receives semi-annual reports on their status as a minimum. Since this program is under the direct control of a sitting member of the KWIEC, any recommendations or issues can be immediately addressed.

The Voice Mutual Aid and Interoperability Program

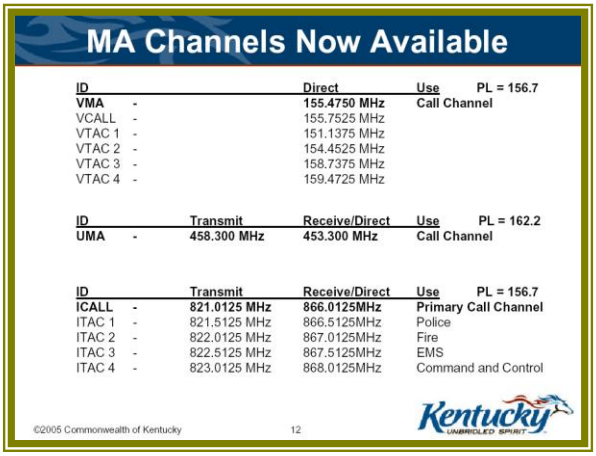
This award winning program continues to serve the first responders of the Commonwealth. It is available at absolutely no cost, can be used by responders with their existing voice radio equipment, requires no additional training, and has no effect on user's operational capability.

Just two years ago the Commonwealth was hobbled with scattered islands of communications that had minimal voice interoperability. This minimal capability was controlled by various agencies and more often than not, neighboring agencies were simply unable to communicate with each other or any state agency.

In just two years the Commonwealth progressed from these scattered islands of communications to a state controlled and maintained interoperable communications system that provides over 97% coverage as shown in this map. This capability allows the Commonwealth's first responders the ability to communicate with each other in real time at the touch of a button.



Use of this system has been observed in real life situations such as the recent floods in Elizabethtown, and the train derailments in the Louisville Metro area, among others. Its obvious benefit has not gone unnoticed as evidenced by the Kentucky Office of Homeland Security's requirement for participation in this program for funding of future wireless projects.

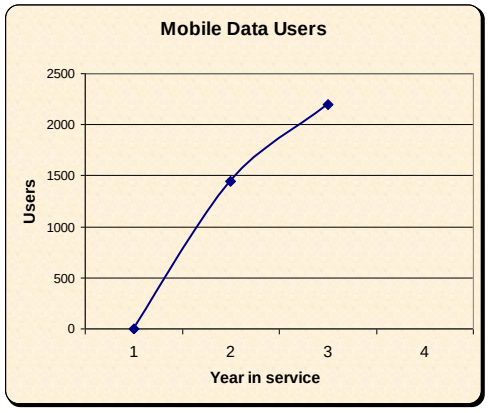


This project continues to develop and discussions concerning expanding the network to fill in the few coverage gaps remaining and addressing the single repeater channel available in the 450MHz mutual aid spectrum are ongoing.

The Mobile Data Program

The project to deploy the Mobile Data infrastructure was completed in 2006, and as an operational program it continues to mature. This infrastructure now consists of over 160 transmitter locations which provide connectivity to first responders across most of the Commonwealth. With this infrastructure, first responders are provided a means of accessing various centralized databases (law enforcement, emergency management, and others) from mobile locations. Additionally, it provides a means of connecting various other support applications such as KYWINS Messenger.

This Mobile Data network provides secure data to mobile users at a shared bandwidth of 19.2Kbps. While considered exceptionally slow by today's broadband standards, it is usually adequate for passing the simple text information required by first responders in the field, provided the system is not overburdened with multiple simultaneous requests. For typical use, including receiving and sending addresses, license plate numbers, driver information, and other information of this kind, this system will continue to serve.



Since the project began just three years ago, this system has continued to expand and has become an indispensable tool for first responders exchanging information and providing emergency services to the citizens of the Commonwealth. The included chart, left, shows the growth in the number of mobile users and, if projected into the future, indicates that users are expected to double by the end of this decade. While this is a good thing for first responders and citizens, rapid growth will eventually cause the network to reach its traffic carrying limit. Although not a critical need at this point, this anticipated continued growth will eventually require a wireless broadband system.

The KWIEC is well aware of this eventuality and studies into different methods of bandwidth augmentation are already underway. Systems being discussed include potential broadband 700MHz systems, WiMAX systems, and cellular broadband systems. If deployed only in high usage population centers, these systems would alleviate most of the anticipated traffic issues for years to come.

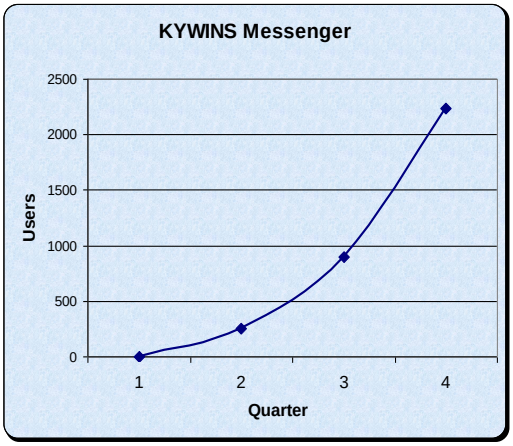
KYWINS Instant Messenger Program

As part of the ongoing effort to satisfy the communications requirements of first responders throughout the Commonwealth, the KYWINS Messenger Instant Messenger project was initiated. After its pilot project was completed last year, the program was formally launched, is now fully operational, and has been growing since.

As previously reported this program allows near real time, encrypted, text base communications in a closed network controlled by the Commonwealth. This system uses the existing Mobile Data Terminal infrastructure for tactical communications and a secure Internet connection for strategic communications. It allows interoperability with any participating agency and interfaces with existing systems with negligible or no impact.

Its primary function is to service first responders in non-critical instances where secure near-real time text communications with one another is desired. The application does this very well, and is also expected to reduce the load on critical voice communications.

Another added benefit of this program is that it allows agents in the field the ability to send instant messages to other agents located in offices. This is possible regardless of their location in the Commonwealth. As additional bandwidth becomes available in the future, this application can be used to transfer large files such as photos. Currently this ability is available but has been disabled due to the limited bandwidth of the mobile data infrastructure.



This program has been far more successful than anticipated, and its growth continues to be impressive. After less than one year in service this system has nearly 2,300 users, with hundreds more projected to join by the end of 2007. It can easily be seen that this system has filled a void that was previously unaddressed. The chart at left shows the dramatic increase of users in just the first four quarters of system use.

This rapid growth is not a concern, since the system has the capability of growing to support more than ten times the current amount of users if needed.

Goal 2 - Install all of the new digital microwave systems in the Eastern segment of the Kentucky emergency warning systems (KEWS)

Kentucky Emergency Warning System Digital Upgrade Project

The Kentucky Emergency Warning System (KEWS) is a thirty year old statewide microwave communications network which supports the communications requirements of local, state, and federal first responder agencies. Its primary purpose is to support communications for these agencies in times of emergencies and additionally provides connectivity and support for their day-to-day operations.

After nearly thirty years, the system is well past the end of its expected life and clearly in need of replacement. To that end, the Commonwealth commissioned Harris microwave to upgrade the KEWS network to a new state-of-the-art digital system. The new system will provide a huge increase in traffic carrying capability and will be exceptionally reliable.

This ongoing infrastructure upgrade project was initiated in late 2006 as a multi-year effort and has been funded at $26.8 Million to date. Estimated costs to complete the project across the entire state are approximately $45 Million, with the remaining funding still to be acquired.

The scope of effort to upgrade this vast statewide network is daunting. Replacement of all old radio systems with new digital radio systems is but one small aspect of the upgrade. Additional aspects of this project include installation of new towers, upgraded power generators and battery systems, upgrading electrical grounding, replacing shelters, reinforcing all towers to withstand additional ice and wind loads, and extending towers as needed. When completed, the new system will be highly survivable and offer additional benefits to every supported agency that uses the system.

The upgraded system will be an all-digital, IP-based microwave network capable of directly supporting current and emerging technologies such as video and voice over IP, among others. It provides a network that is far superior to the existing system in every conceivable way and, when fully implemented, will provide a self-healing, robust backbone that will support public safety agencies throughout the Commonwealth for decades to come.

Since this public safety system consists of approximately 140 communication sites serving all 120 counties in the Commonwealth, the project was split into two phases with separate objectives. This was done primarily to ease the financing and management burden of such a large project.

The project phases are: Phase 1 - Discovery, and Phase 2 – Implementation. Each of the phases is described in more detail below.

Phase I - Discovery

Phase 1 of the KEWS upgrade was labeled the Discovery phase. This phase was dedicated to capturing the information necessary to properly document the condition of the existing statewide network, determining future requirements, and making design and engineering decisions based on this discovery.

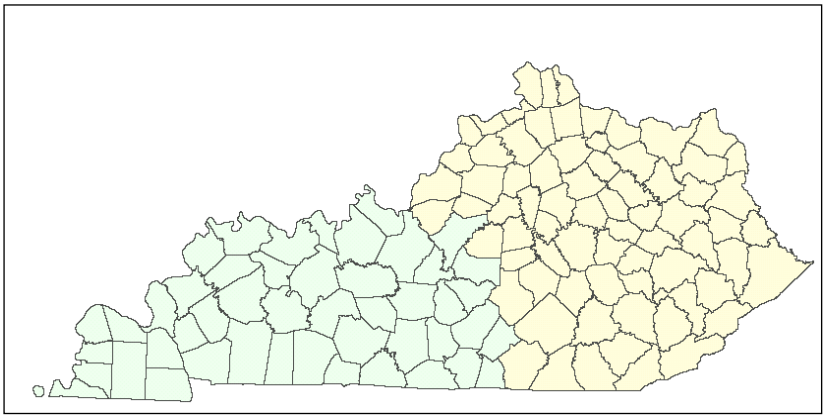
It required a detailed physical survey of every KEWS site and included shelter, equipment, battery backup, power generators, tower structure, grounding, geophysical, and geotechnical evaluations of the land. Complex computer models were also used to analyze and configure optimum microwave paths, identify necessary tower reinforcements, and help determine numerous other upgrades required.

This surveying phase was largely completed in late 2006 and provided the information needed to begin the detailed engineering efforts.

Phase II – Implementation

Phase two consists of the implementation efforts involved in actually replacing the old system with the new. This phase was further split into two geographical segments called the Eastern and Western segments. The map below shows the color-coded breakdown of the segments by county.

After much discussion and consideration, the decision was made to start the project implementation in the Eastern portion of the state. This was done for several reasons, not the least of which was the consideration of weather conditions and terrain.



The Commonwealth is currently in Phase 2 - Eastern segment of this project, which is targeted for completion by the end of the year. Phase 2 - Western, if funded, will follow immediately afterward.

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Western Segment

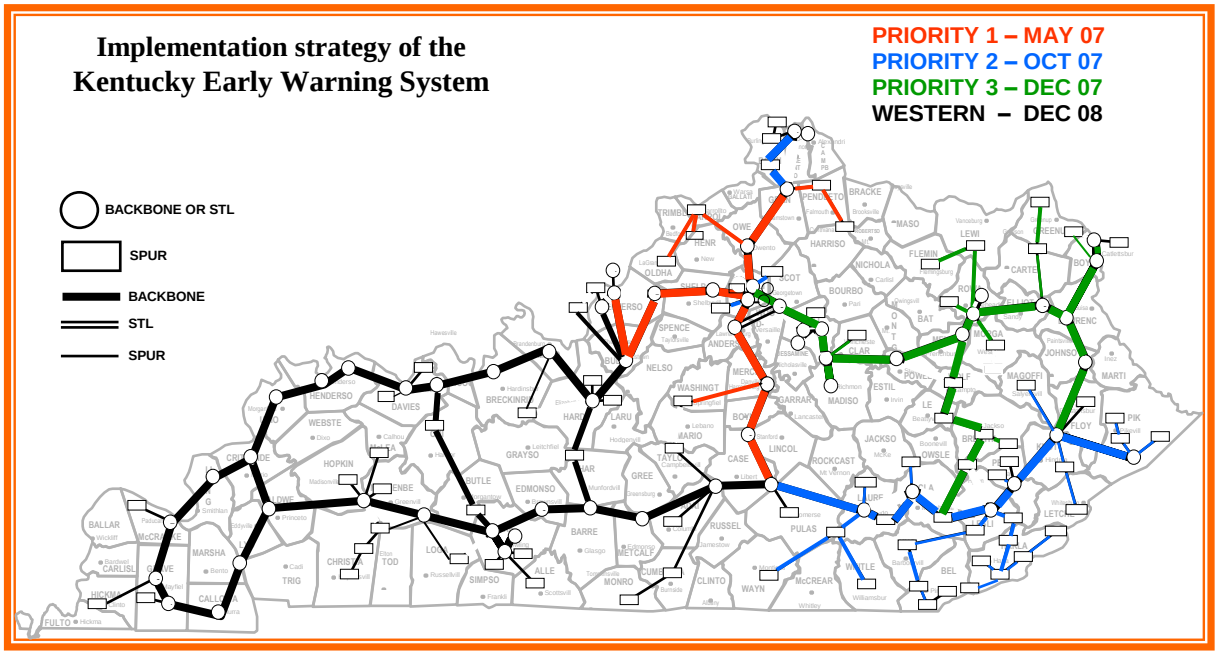
This segment has already been surveyed and engineering efforts can begin as soon as the funding is procured.

Eastern Segment

This segment was further divided into three separate implementation efforts, placed in order of priority. As can be seen from the Implementation Strategy Map below, key sites centered in Frankfort stretch out to the north, west, and south, making up the Priority 1 section. The

Somerset–to-Pikeville sites make up the second priority, and finally the Pikeville-to–Ashland-to-Frankfort section makes up the third priority.

These sites were place in this order to ensure that the KEWS Site 1 in Frankfort was completed first, since it is essentially the hub of the network.



Due to the sheer volume of work required, all priorities in the Eastern segment have had simultaneous ongoing efforts with teams moving quickly from one location into the next. This has been necessary to ensure that the implementation timeline stays on track.

This critical Eastern segment has progressed significantly since the last report. Since the completion of the surveys and engineering, the following has occurred and will continue.

- Engineering drawings are being submitted as they are completed
- FCC, FAA, and other key approvals have been received
- Shelters have been repaired or replaced as needed
- Site and tower electrical grounding has been upgraded
- Electrical services have been upgraded where needed
- Generators, fuel tanks, and automatic transfer switches were installed in key sites
- Towers have been analyzed and reinforced were needed
- Battery back up systems have been installed in primary locations
- Road repairs were completed as required
- New equipment racks have been installed at selected sites

Site upgrade of a KEWS site in Priority 1

This series of photos show work progressing at a selected site in the New Bernheim area.

← *This is the site as it originally was...*

The work in progress →

← *The final result with upgraded shelter, power generation equipment, and improved grounding.*

The results of this effort are obvious and similar events are occurring at several of the remaining sites in this segment.

Goal 3 - Increase public awareness and utilize outreach programs to promote the public safety and communications interoperability effort

This goal has proven to be one of the most challenging, but the KWIEC has undertaken various methods to meet this goal. Among them is establishing and maintaining associations with agencies who have direct use of interoperable communication technologies.

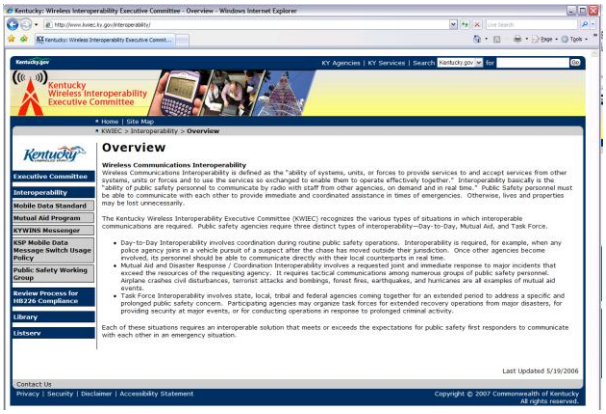
To that end, the KWEIC maintains a website dedicated to dissemination of information concerning interoperability efforts in the Commonwealth. Additionally, each KWIEC meeting is made available immediately via webcast and the session is recorded and stored to the website for retrieval as described below.

Associations Established to Promote Communication Interoperability

The Kentucky Wireless Interoperability Executive Committee continues to work with various state and local agencies in an effort to promote interoperability for both wireless voice and data communication.

The associate agencies include the Commonwealth Office of Technology, the Department of Military Affairs and Emergency Management, the Center for Rural Development, the Kentucky State Police, and the Kentucky Office of Homeland Security, and others. These agencies have contributed immensely to many of these outreach efforts including the planning and execution of various visits and exercises to further this common outreach goal.

Kentucky Wireless Interoperability Executive Committee Website



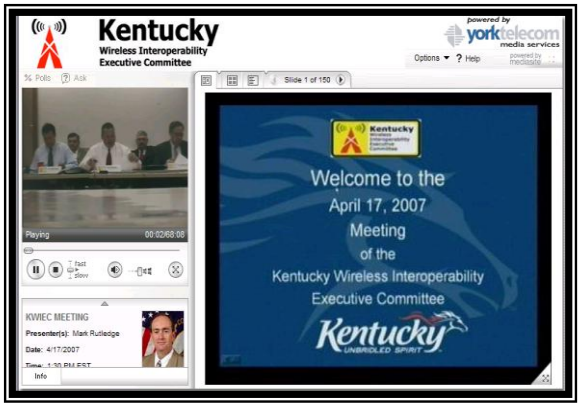
The KWIEC website is available online at www.kwiec.ky.gov.

This website provides information to the public and to the various first responder agencies about Kentucky's wireless interoperability initiatives. It provides a single source for information on the major interoperability programs in the Commonwealth and provides local agencies with the information necessary to successfully submit wireless project plans for evaluation.

It continues to promote the development of wireless standards and methodologies, lists approved standards and methodologies, and provides resources that include KWIEC meeting minutes, special event announcements, conference information, research documents, and web links.

Kentucky Wireless Interoperability Executive Committee Webcast

Every KWIEC meeting is open to the public and announced well in advance, but travel and other issues have sometimes precluded interested parties from attending. To resolve this problem, the State CIO ordered that all meetings be webcast and made available for viewing by the citizens of the Commonwealth. To that end, each KWIEC meeting is now available for viewing via streaming video or webcast. This technology allows a far larger audience to be reached than would otherwise be possible, benefiting both the public and first responder agencies.

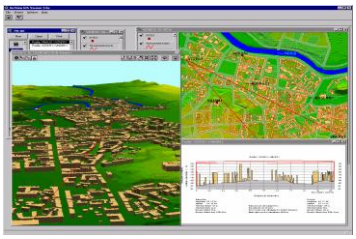


The technology employed for use at KWIEC meetings presents a slightly delayed (5-10 seconds) live viewing via the Internet to anyone interested in watching the meetings. The presenter's slide show can be followed in real time by the viewing audience since the briefing slides are simultaneously sent out with the video and audio streams.

In addition to the real-time streaming video, a link to each meeting is maintained on the website for later viewing by interested parties.

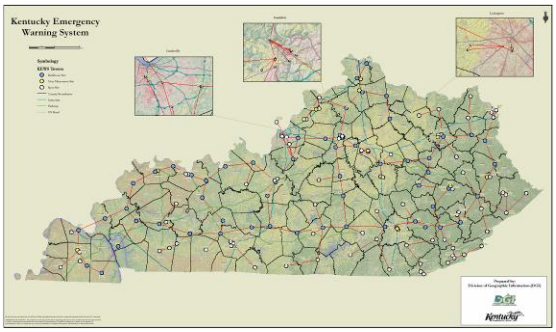
KWIEC Informational Briefings

In addition to the Interoperability Initiative briefing, the Chairman of the KWIEC periodically requests informational briefings from various agencies. These briefings are to ensure that the sitting members of the KWIEC have been informed of the various resources available to the KWIEC, initiatives being undertaken by other agencies, and newer technologies being made available.



During the last year, KWIEC informational briefings were provided by these agencies:

- Kentucky Office Homeland Security
- Kentucky State Police
- Department Military Affairs
- Department of Public Health
- Kentucky Emergency Warning System Agency
- Geographical Information Services Agency



2008 Public Safety Wireless Interoperability Planned Goals

The 2007 interoperability goals for the Commonwealth have long-term requirements and are expected to carry over as continuing goals for 2008. As occurred earlier this year, the KWIEC may realign its goals as projects are completed to best serve the Commonwealth's citizens and its first responders.

These goals are carried over from 2007:

- Continue efforts to improve statewide interoperability for public safety
- Install all of the new digital microwave systems in the Eastern segment of the Kentucky emergency warning systems (KEWS)
- Increase public awareness and utilize outreach programs to promote public safety and the communications interoperability effort

New KWIEC goals that have been discussed but not voted on are listed below. The following additional goals will be discussed and voted on in an upcoming KWEIC meeting:

- Procure the additional funding and install the new digital microwave systems in the Western segment of the Kentucky Emergency Warning System (KEWS)
- Review, fine tune, and publish the long term strategic plan for communications interoperability for the Commonwealth

In addition to working on the published goals, the KWIEC will continue to concentrate on the continued improvement of the existing programs in place. With the huge growth of the current interoperability operational programs the KWIEC must consider the expansion or augmentation of these systems. This will be addressed in the coming year.

Conclusion

This year, many of the interoperability initiatives begun in previous years were completed. This includes the Voice Mutual Aid and Interoperability project, the Mobile Data project, and KYWINS Messenger project. With the transition of these projects to fully operational programs, the Commonwealth now has a reliable means of interoperability at the voice, data, and application level. With these critical projects complete, it now falls on the Commonwealth to continue to improve these systems and build on previous successes.

As successful as these initiatives have been, the aging public safety infrastructure simply is not up to the task required of it any longer. To address this issue, the Kentucky Emergency Warning System (KEWS) project was chartered to upgrade this infrastructure. To date, this project has only been funded for the eastern portion of the state. The eastern segment of the state is expected to be complete in the next six months and, thus far, additional funding to complete the western segment of the state has not been procured. The support of the legislature in the continued funding for the KEWS Digital upgrade project through the western segment is critical to the long term interoperability goals of the Commonwealth. Once the infrastructure is complete, this new digital network will provide a huge increase in capability and reliability and will greatly enhance the public safety agencies relying on this system.

The KWIEC continues to provide a setting for disseminating information, providing guidance and direction, and coordinating the interoperability efforts of public safety and first responder agencies statewide.